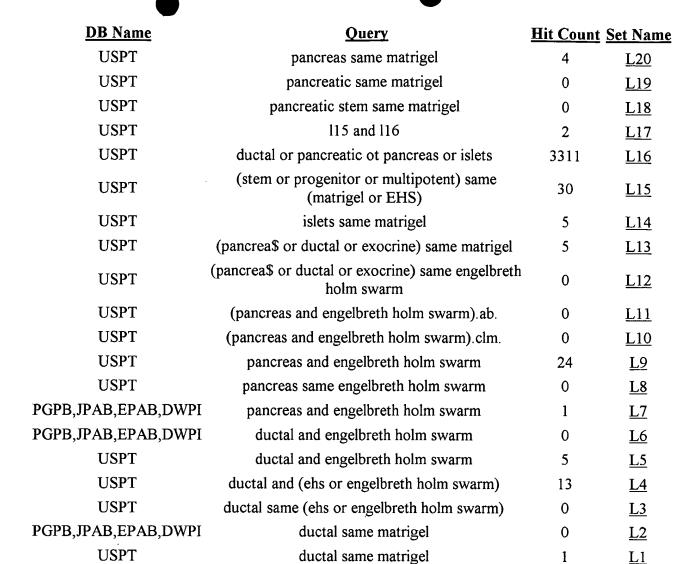


(FILE 'HOME' ENTERED AT 11:26:35 ON 12 OCT 2001)

	FILE	'CAPL	JS	' ENTERED AT 11:27:49 ON 12 OCT 2001
L1		33	S	PANCREATIC (P) MATRIGEL
L2		521	S	EHS
L3		0	S	L2 AND L1
L4		0	S	DUCTAL SAME MATRIGEL
L5		64470	S	STEM OR PLUROPOTENT AND PROGENITOR
L6		0	S	L1 AND L5
L7		7	S	ISLETS (P)MATRIGEL
	FILE	'MEDLINE' ENTERED AT 11:37:06 ON 12 OCT 2001		
L8		0	S	DUCTAL SAME MATRIGEL
L9		21	S	DUCTAL (P) MATRIGEL
L10		26334	S	ISLETS
T.11		4	S	T.9 AND T.10



L9 ANSWER 21 OF 21 MEDLINE

Monolayers of cultured epithelial cells have been prepared from fragments of gwinea pig pancreatic excretory ducts isolated by a simple procedure employing collagenase digestion and manual selection, through which virtually all of the ductal system can be recovered. The isolated fragments were cultured in enriched Waymouth's medium on extracellular matrices of various composition and thickness, including: thin (less than 5 micron) and thick (0.5 mm) layers of rat tail collagen; thin layers of human placental collagen; thin layers of Matrigel (a reconstituted basement membrane material); uncoated tissue culture plastic; and the cellulose ester membranes of Millipore Millicells. Cells spread rapidly from duct fragments cultured on uncoated plastic or on plastic coated with thin layers of rat tail collagen or human placental collagen and formed epithelial monolayers. However, these cells were squamous and lacked the abundant basolateral membrane amplification and apical microvilli characteristic of freshly isolated duct epithelial cells. Cells did not spread from duct fragments cultured on Matrigel. In contrast, when fragments of pancreatic ducts were explanted onto either a thick layer of rat tail collagen or onto Millicell membranes, cells readily spread and formed confluent monolayers of cuboidal epithelial cells characterized by abundant mitochondria, apical microvilli, and basolateral plasma membrane elaboration. These results demonstrate that different forms of extracellular matrix modulate the growth and differentiation of pancreatic duct epithelial cells, and that culture on a permeable substrate markedly enhances the maintenance of differentiated characteristics in this cell type. The monolayers formed on Millicell membranes should provide a useful model system for physiologic analysis of the regulation of electrolyte secretion by this epithelium.

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AUTHOR:

Hootman S R; Logsdon C D

CORPORATE SOURCE:

Department of Physiology, University of California, San

Francisco 94143.

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